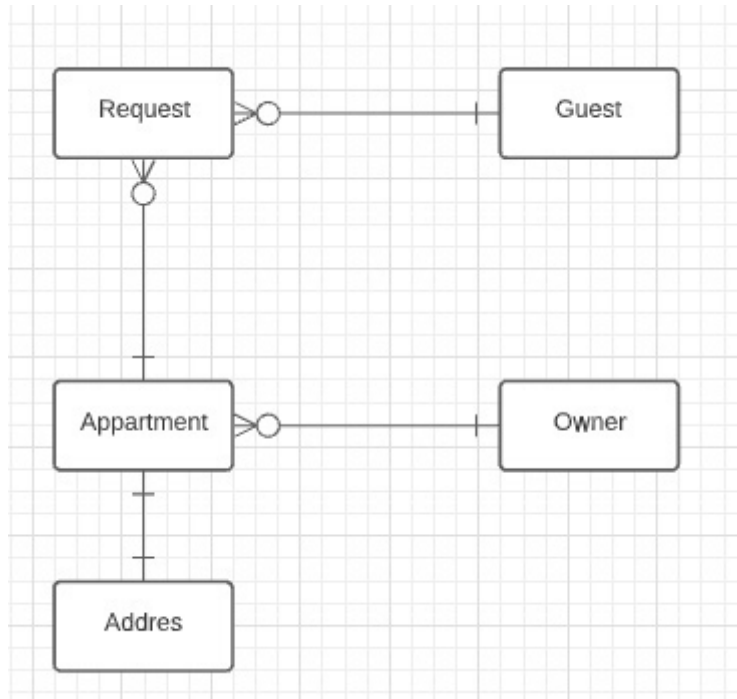


BSE195 Murzabekov Sultan

1 Task. E/R diagram



2 Task. DDL

```
CREATE table apartment(  
  apartment_number NUMBER PRIMARY KEY NOT NULL,  
  number_of_rooms NUMBER NOT NULL,  
  area NUMBER NOT NULL,  
  floor NUMBER NOT NULL,  
  number_of_bathrooms NUMBER NOT NULL,  
  price NUMBER NOT NULL,  
  req_id NUMBER NOT NULL,  
  FOREIGN KEY (req_id) REFERENCES requests (req_id)  
);
```

```
CREATE TABLE owners(  
  owner_name varchar(256),  
  own_id NUMBER PRIMARY KEY NOT NULL,  
  apartment_id NUMBER NOT NULL,  
  FOREIGN KEY (apartment_id) REFERENCES apartment (apartment_id)  
);
```

```
CREATE TABLE requests(  
req_id NUMBER PRIMARY KEY NOT NULL,  
number_of_refusal NUMBER,  
request_date date NOT NULL,  
date_of_confirmation date,  
date_of_refusal date,  
cancellation_date date,  
period DATE  
);
```

```
CREATE table adres(  
addr_id number PRIMARY KEY NOT NULL,  
country varchar(50) NOT NULL,  
city varchar(25) NOT NULL,  
street varchar(70) NOT NULL,  
house_number NUMBER NOT NULL,  
apartment_number NUMBER NOT NULL  
);
```

```
CREATE TABLE guest(  
guest_name varchar(256),  
guest_id NUMBER PRIMARY KEY NOT NULL,  
apartment_id NUMBER NOT NULL,  
req_id NUMBER NOT NULL,  
FOREIGN KEY (req_id) REFERENCES requests (req_id)  
);
```

3 Task. SQL

```
SELECT apartment_number  
FROM apartment,adres,requests  
where adres.apartment_number = apartment.apartment_number AND apartment.req_id =  
requests.req_id  
and city = 'Moscow' AND number_of_refusal >= 5 AND request_date = EXTRACT(YEAR FROM  
CURRENT_DATE)
```

4 Task. SQL

```
SELECT *  
FROM apartment,adres,requests  
where adres.apartment_number = apartment.apartment_number  
AND apartment.req_id = requests.req_id and guest.req_id = requests.req_id  
and city = 'Moscow' AND number_of_refusal >= 5 AND request_date = EXTRACT(YEAR FROM  
CURRENT_DATE)  
AND cancellation_date IS NULL
```

5 Task. SQL

```
SELECT country,number_of_rooms,number_of_refusal
FROM adres,apartment,requests
WHERE adres.apartment_number = apartment.apartment_number and apartment.req_id =
requests.req_id
and date_of_refusal is not NULL
GROUP BY country,number_of_rooms,number_of_refusal
```

6 Task. SQL

```
SELECT country,number_of_refusal,price
FROM adres,apartment,requests
WHERE adres.apartment_number = apartment.apartment_number and apartment.req_id =
requests.req_id
and date_of_refusal is not NULL AND date_of_refusal >= DATEADD(EXTRACT(MONTH FROM
CURRENT_DATE), datediff(EXTRACT(MONTH FROM CURRENT_DATE), 0, getdate())-1, 0)
GROUP BY country,number_of_refusal,price
```

7 Task. SQL

```
SELECT owner_name, sum(price)
FROM owners,apartment limit 1
WHERE owners.apartment_id = apartment.apartment_id
AND owner_name not in (SELECT owner_name FROM owners,apartment limit 2 ORDER BY sum(price)
DESC)
ORDER BY sum(price)
DESC
```

8 Task. SQL

```
SELECT DISTINCT guest_name
from guest,requests r1,requests r2,apartment app1,apartment app2
where guest.req_id = r1.req_id and guest.req_id = r2.req_id
AND app2.req_id = r2.req_id AND app2.req_id = r1.req_id
AND app1.req_id = r2.req_id AND app1.req_id = r1.req_id
AND r1.date\_of\_confirmation IS NULL AND r1.date\_of\_refusal IS NULL
AND r2.date\_of\_confirmation IS NULL AND r2.date\_of\_refusal IS NULL
AND r1.date\_of\_confirmation = r2.date\_of\_confirmation and app1.apartment_number =
app2.apartment_number
AND (EXTRACT(DAY FROM r1.period) - EXTRACT(DAY FROM r2.period) <='3' OR EXTRACT(DAY FROM
r2.period) - EXTRACT(DAY FROM r1.period) <='3')
```